

REMARKS

Claims 15-18 and 20-22 have been amended. Claim 19 has been canceled. Applicant reserves the right to pursue the original claims and other claims in this application and other applications. Claims 15-18 and 20-22 are pending in this application.

The specification has been amended to update the application information included in paragraph [0001]. Paragraph [0010] has been amended to correct the error noted by the Examiner. A corrected Abstract is attached as required by the Examiner.

The drawings were objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. Specifically, the proportional printing step is not shown in Fig. 5. An Annotated Sheet Showing Changes and a Replacement Sheet for Fig. 5 is attached. Specifically, in Fig. 5, at step 74, "proportional" has been added before "print rates." No new matter has been added, as the support for this correction was provided in the specification and claims as originally filed.

Claims 15-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yokoi et al. (U.S. Patent No. 5,873,663). Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yokoi et al. in view of Kritz et al. (U.S. patent No. 3,761,880). Reconsideration is respectfully requested.

The present invention is directed to a method and system for printing images such as postal indicia where printer control signals used to drive a print head cannot be easily copied or recreated and which can be implemented using standard printer components. In one embodiment, the corresponding sequence of blocks is printed using different travel rates for each indicium. This makes it difficult for an attacker to record the print head control signals synchronously with the motor control signals and replay them at a later time to produce an illegitimate indicium.

In view of the above, claim 15 as amended is directed to a method for printing a first image and a similar second image that comprises "forming a sequence of graphic data blocks for each of said first and second images, said sequence forming a bitmap

representative of each respective image; selecting first varying rates of travel and proportional printing rates for a print head to print each of said blocks in said first image; sequentially positioning the print head and printing said blocks in said first image at said selected first rates of travel and said print rates; selecting second varying rates of travel and proportional printing rates for said print head to print each of said blocks in said second image, said second rate of travel for a block of said second image being different than said first rate of travel for a corresponding block of said first image; and sequentially positioning the print head and printing said blocks in said second image at said selected second rates of travel and said print rates.

Yokoi et al. is directed to a printing apparatus where printing is performed at a constant printing density in an acceleration/deceleration area in addition to the area where the carriage is moving at a constant speed. (Abstract). By enabling printing, while maintaining constant dot pitch, in the acceleration/deceleration area of the carriage as well as in the constant speed area, the length in the main scanning direction can be shortened to obtain the same printing length. As a result, a compact printing apparatus capable of high quality printing can be provided. (Col. 4, lines 47-56). Note, however, that in Yokoi et al., the carriage speed for each image will be identical, e.g., there will be the acceleration area, followed by the constant speed area, and the deceleration area as illustrated in Fig. 5. Thus, if the system in Yokoi et al. is used to print two similar images, the printing speed for each corresponding block in the first and second image will be the same. The rate of travel for the carriage in Yokoi et al. from image to image does not change. Instead, the rate of travel will be the same for each image. There is no disclosure, teaching or suggestion in Yokoi et al. of “selecting first varying rates of travel and proportional printing rates for a print head to print each of said blocks in said first image; sequentially positioning the print head and printing said blocks in said first image at said selected first rates of travel and said print rates; selecting second varying rates of travel and proportional printing rates for said print head to print each of said blocks in said second image, said second rate of travel for a block of said second image being different than said first rate of travel for a corresponding block of said first image; and sequentially positioning the print head and printing said blocks in said second image at said selected second rates of travel and said print rates” as is recited in claim 15.

For at least the above reasons, Applicants respectfully submit that claim 15 as amended is allowable over the prior art of record. Claims 16-18 and 20-22, dependent upon claim 15, are allowable along with claim 15 and on their own merits.

With respect to claim 22, as noted by the Office Action, Yokoi et al. does not disclose, teach or suggest randomly reordering the blocks to form a new sequence, and printing the blocks in the new sequence. To overcome this deficiency, the Office Action relies on the reference to Kritz et al. Applicants respectfully disagree.

Kritz et al. is directed to a variable speed printer in which the print head is driven at a speed related to the number of characters stored in the buffer storage and is energized to print the character then being transmitted from the buffer storage whenever one of a plurality of particular instantaneous positions of the print head is sensed by a sensing means, which also initiates the making available of the next character in the buffer storage for transmission. (See Abstract).

The Office Action points to Col. 11, lines 52-70, to support the contention that Kritz et al. discloses randomly reordering the blocks to form a new sequence and sequentially printing a print head to print the blocks in the new sequence. In that section, it is stated that a print head includes "a multistage buffer storage means, said storage means having an input means for sequentially receiving and storing the bytes in different stages and output means for sequentially transmitting the bytes stored in the different stages in the order in which the bytes were received." It would appear that the Office Action considers the "different stages" to be analogous to randomly reordering the blocks. This is not correct. The different stages in Kritz et al. refers to the storage of the bytes in sequentially addressed byte registers. In Kritz et al., each byte from the data source 12 is processed in the same way so that the bytes are stored in sequentially addressed byte registers of memory 200. There are 16 such byte registers. Thus, if write address register 202 is a four stage binary counter it will count modulo-16 so that addresses zero to 15 are sequentially generated for the first 16 bytes that are received and then the cycle repeats, i.e., byte 17 is stored in byte register zero, byte 18 in byte register one, etc. (Col. 7, lines 8-16). Thus, the different stages refers to the addresses within the register in which each byte is being stored. This is clearly not the same as randomly reordering the data blocks. Furthermore, there is no disclosure, teaching or suggestion in Kritz et al. of printing the

data blocks in the new sequence, as the bytes in Kritz et al. are transmitted for printing in the order in which the bytes were received (See Col. 7, lines 17-19; Col. 11, lines 60-62). If the bytes are printed in the same order as they are received, there is clearly no reordering of the blocks in a new sequence and printing the blocks in the new sequence as in the present invention.

In view of the foregoing amendments and remarks, it is respectfully submitted that the claims of this case are in a condition for allowance and favorable action thereon is requested.

Respectfully submitted,



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Enclosures

ANNOTATED SHEET SHOWING CHANGES

F-529



3/3

